How Will We Know "Good" Qualitative Research When We See It? Beginning the Dialogue in Health Services Research

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Objective. To lay the foundation for an explicit review and dialogue concerning the criteria that should be used to evaluate qualitative health services research. Clear criteria are critical for the discipline because they provide a benchmark against which research can be assessed.

Data Sources. Existing literature in the social sciences and health services research, particularly in primary care and medicine.

Principal Findings. Traditional criteria for evaluating qualitative research are rooted in the philosophical perspective (positivism) most closely associated with quantitative research and methods. As a result, qualitative research and methods may not be used as frequently as they can be and research results generated from qualitative studies may not be disseminated as widely as possible. However, alternative criteria for evaluating qualitative research have been proposed that reflect a different philosophical perspective (post-positivism). Moreover, these criteria are tailored to the unique purposes for which qualitative research is used and the research designs traditionally employed. While criteria based on these two different philosophical perspectives have much in common, some important differences exist.

Conclusion. The field of health services research must engage in a collective, "qualitative" process to determine which criteria to adopt (positivist or post-positivist), or whether some combination of the two is most appropriate. Greater clarity about the criteria used to evaluate qualitative research will strengthen the discipline by fostering a more appropriate and improved use of qualitative methods, a greater willingness to fund and publish "good" qualitative research, and the development of more informed consumers of qualitative research results.

Key Words (MeSH Terms). Health Services Research (Methodology or Health Services Research, Methodology; Research—Methods or Research, Methods; Reproducibility of Results; Research Design; Evaluation Studies; Health Care Evaluation Methods

Other Key Words. Qualitative research and methods, mixed methods, standards, evaluation criteria

Nothing provides more opportunity to strengthen a discipline than an explicit examination and clarification of the criteria by which research is assessed. Such criteria represent a discipline's collective perspective on fundamental issues, including the kinds of questions that are worth asking; the ways of answering questions that are legitimate; the constituent elements of evidence and the weighting of those elements; the appropriate role of the researcher; and, the ways in which results should be presented and used. In essence, criteria provide a benchmark against which research can be evaluated.

The purpose of this article is to lay the foundation for an explicit review of, and dialogue about, the criteria that should be used to evaluate qualitative health services research.[1] The question of how to assess the rigor of a qualitative study has engendered significant debate within basic (e.g., anthropology and sociology) and applied (e.g., evaluation research) social science disciplines and the clinical sciences (e.g., medicine). Moreover, this debate can be extraordinarily difficult to map and understand for two reasons. First, qualitative research is neither monolithic nor static. The particular issues of concern in each discipline and the language (i.e., the disciplinary jargon) used to discuss them are somewhat unique and evolving given the discipline's tradition of qualitative research. The philosophical and theoretical perspectives[2] that inform the use of particular qualitative methods (e.g., observation, interviewing), and the extent to which qualitative methods are accepted as legitimate modes of inquiry, shape the debate in any field. As a result, it can be very difficult to follow developments within and across disciplines.

Second, different ways of using the term "qualitative research" often create confusion. Sometimes the term denotes a paradigm that competes with quantitative research and the philosophical perspective with which it is associated (i.e., positivism). Building on the work of Kuhn (1970), Patton (1990) defines a paradigm as:

> a world view, a general perspective, a way of breaking down complexity of the real world. As such, paradigms are deeply embedded in the socialization of adherents and practitioners: paradigms tell them what is important, legitimate,

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and reasonable. Paradigms are also normative, telling the practitioner what to do without the necessity of long existential or epistemological consideration.

At other times, the term "qualitative research" refers to a diverse set of methods for conducting social research that are appropriate for answering particular types of research questions and, therefore, are capable of being integrated with quantitative research.[3] Authors often vacillate between the philosophical and methodological meanings without being clear about the one to which they are referring or without specifying the relation between the two. As discussed further on, the link between paradigms, theoretical perspectives, and particular qualitative methods is real but imperfect.

The complexity of the debate in other disciplines makes it challenging for the health services research field to develop a strong consensus about the criteria to use to evaluate qualitative research. Two fields that have had a major effect on the development of health services research, economics and medicine, have historically had relatively little interest or expertise in qualitative research (Ginzberg 1991; Jones 1995; Inui 1996). In addition, significant differences of opinion have emerged concerning the philosophical foundations and practice of qualitative research in fields that have historically used these methods, especially anthropology, sociology, and evaluation research.[4] Despite these challenges, the field of health services research has developed to the point where it should revisit the paradigmatic assumptions on which current criteria rest in order to develop a stronger consensus about the specific criteria used to evaluate studies employing qualitative research methods.

There are three compelling reasons why the field would benefit from engaging in an explicit review of, and dialogue about, the criteria for evaluating research that employs qualitative methods and the paradigmatic assumptions that underlie them. First, the use of qualitative research methods in health services research is growing. (In addition to this special issue, see also Crabtree and Miller forthcoming; Berkwits and Inui 1998; Jones 1995; Pope and Mays 1995; Britten et al. 1995; Inhorn 1995; Gubrium 1992; Willms, Best, Taylor, et al. 1990; and Conrad 1990). Fundamental theoretical and substantive issues, including clinical, organizational, and policy decision makers' need for knowledge and information in new and rapidly evolving areas, are increasing the demand for qualitative research. Qualitative research and methods are well suited to address many of these challenges (e.g., see the Sofaer and the Hurley articles in this issue). In short, health services research needs qualitative research in its theoretical and methodological toolbox in order to

answer pressing questions about our nation's complex and rapidly changing health care system.

Second, the increased interest in qualitative research methods makes it possible for the field to focus on improving the quality of such research. Specifically, the field can engage in a more sustained dialogue about the range of qualitative research and methods, rather than engaging exclusively in what Kahn (1993) terms the "discourse of justification" (i.e., a discussion or defense of qualitative research primarily in relation to quantitative research). The promise of qualitative research is more likely to be fulfilled if the health services research community more deeply understands the diversity of qualitative research and the methods criteria for evaluating it.

Finally, clearer criteria for evaluating qualitative research should lead to a greater willingness to fund and publish qualitative research. A result will be the increased and more appropriate use of qualitative research, better dissemination of qualitative research results, and a clearer picture of the professional human resource needs in this area. As I discuss further on, the positivist philosophical perspective has historically been the one most closely associated with quantitative research methods, and it has shaped the criteria used to evaluate grant applications and manuscripts in health services research. Because of the philosophical roots of these criteria, studies employing qualitative methods have often been viewed unfavorably, regardless of the research conditions (e.g., high uncertainty, poor understanding of phenomena, poor quantitative data) or the question (e.g., how, why, what?). (See Reichardt and Cooke 1978, for a discussion of "funding fads").[5] For health services researchers it has historically been difficult to secure funding for qualitative research projects or to publish findings of qualitative studies in health services research journals, particularly when the studies have employed qualitative research methods exclusively. Given these conditions, qualitative methods may not have been utilized as frequently as they could have been, and research results may not have been disseminated as widely and effectively as possible (see Jones 1995; Britten et al. 1995; Fitzpatrick and Boulton 1996).

This article is organized in four sections. The first shows how the criteria traditionally used to evaluate qualitative research in health services research, and the social and clinical sciences on which they rest, stem from a philosophical perspective (i.e., positivism) most closely associated with quantitative research and methods. Although the theoretical perspectives traditionally associated with qualitative methods were often based on different paradigmatic assumptions, separate criteria were often not used to assess them historically, even by qualitative researchers themselves. In the second section,

I delineate two forces that have stimulated other disciplines to reconsider the use of these criteria. Specifically, I show how the reassertion of an alternative paradigm in the social sciences (i.e., post-positivism) and the goal of putting research results into practice challenge the use of traditional criteria. Third, through a comparison of three sets of criteria proposed in primary care and medicine, I illustrate how the positivist and post-positivist paradigms are shaping the evaluation criteria proposed and used in health services research. Although these different paradigms, as well as the criteria derived from them, have much in common, there are advantages and limitations to adopting either set, or some combination of the two, in the future. The article concludes with a discussion of possible next steps for the field to take.

TRADITIONAL CRITERIA AND THEIR PHILOSOPHICAL ORIGINS

The criteria traditionally used to evaluate both qualitative and quantitative research in the basic and applied social sciences, clinical sciences, and (by extension) health services research are very familiar to researchers. They are:

- *Internal validity.* The degree to which findings correctly map the phenomenon in question;
- *External validity.* The degree to which findings can be generalized to other settings similar to the one in which the study occurred;
- *Reliability.* The extent to which findings can be replicated or reproduced by another investigator; and
- *Objectivity.* The extent to which findings are free from bias.

The philosophical origins of these criteria (including the assumptions about the social world that accompany their adoption and use) and the relationship between the philosophical perspective and methods are somewhat less familiar.

The philosophical perspective, or paradigm, that primarily underlies these criteria is positivism. Although the meaning of positivism is complex, essentially it is a philosophy that proclaims the suitability of the scientific method to all forms of knowledge (natural and social) and gives an account of what that method ideally entails.[6] The adoption of this philosophical perspective is also accompanied by a broad commitment to the idea that the social sciences should emulate the natural sciences. Of what does the positivist paradigm consist? Five frequently cited elements of this paradigm include a belief that:

1. The methods and procedures of the natural sciences are appropriate to the social sciences. This view stems from positivist ontology, that a stable, objective reality exists independent of an individual's perception.
2. Only those phenomena that are observable, in the sense of being amenable to the senses, can validly be warranted as knowledge. Phenomena that cannot be observed either directly or indirectly with the aid of instruments have no place.
3. Scientific knowledge is arrived at through the accumulation of verified facts that feed into our theoretical body of knowledge. Such findings are often referred to as "laws," that is, empirically established patterns and regularities.
4. Hypotheses are derived from scientific theories and are submitted to empirical testing. This implies that science is deductive.
5. A particular stance toward values occurs in two senses. The first is that scientists or researchers should be purged of their own values because such values may impair objectivity and undermine the validity of the knowledge produced. The second is that a sharp distinction should be drawn between scientific issues and statements, on the one hand, and normative ones, on the other.

Quantitative research has been heavily influenced by positivist philosophy, particularly by idealized accounts of the scientific method and the desire to mimic the natural sciences. We can discern the impact of this philosophical perspective by examining the methodological preoccupations of quantitative research, many of which are related to the evaluation criteria noted previously (i.e., internal and external validity, reliability, and objectivity). For example, quantitative researchers are absorbed with how to define and measure concepts. The focus on defining concepts and operationalizing measures that can stand for them stems from the positivist philosophy that concepts must be made observable because, if the concept cannot be observed and measured, it does not exist. Further, because concepts and their measurement are so central to quantitative research, the technical requirements of operationalization, specifically validity and reliability, are paramount. Methodological textbooks tend to give equal attention to both. However, quantitative researchers most frequently report on reliability because validity testing (particularly for internal validity) is highly time-consuming and cannot be fully addressed with quantitative methods and data alone. Other methodological preoccupations

of quantitative research that reflect their positivist philosophical roots include causality, generalization, and replication.

The affinity between positivist philosophical beliefs, quantitative research methods, and the criteria for evaluating research is clear. What is less clear is the relationship between the positivist paradigm, qualitative methods, and the criteria for evaluating research given the philosophical and theoretical perspectives traditionally associated with qualitative research. (Please refer to Figure 1, p. 1164, for the discussion that follows.)

Proponents of the philosophical perspectives that underlie qualitative research minimally argued for a modification of the five elements of the positivist paradigm just noted. Qualitative researchers argued that there were fundamental limits to the extent to which the methods and procedures of the natural sciences could be applied to the social world. Underlying this view was the ontological assumption that reality is dynamic, contextual, and socially constructed. Unlike inanimate objects, people think, have feelings, communicate through language, and attribute meaning to their environment, and, at least superficially, have different beliefs and personal characteristics. Moreover, social science theories are unlikely to apply across time and place and cannot be the sole source of hypotheses. Rather, scientific knowledge must be developed through inductive as well as deductive empirical study. As Glaser and Strauss (1967) noted, investigators must not only verify existing theories but they must discover the concepts and hypotheses relevant for the areas they wish to research.[7] Finally, because researchers have values and are members of a wider social community, it is impossible to purge themselves and social science more generally of values. As a result of these philosophical differences, proponents of qualitative research argued that the social sciences needed additional theoretical perspectives and methods uniquely suited for studying feelings, subjective experiences, and the meanings that different types of people attribute to events and situations in real-life settings. The investigation of social life using these perspectives and methods is what we now know as qualitative research and methods.

The philosophical and theoretical perspectives associated with qualitative research are diverse and shape all aspects of research design, including the goal of the research and formation of the research question, the data collection and analysis methods used, and the style of the final, written report. For example, Cresswell (1998) identifies five distinct "traditions of inquiry," which he defines as "an approach to qualitative research that has a distinguished history in one of the disciplines that has spawned books, journals, and distinct methodologies that characterize its approach."[8]

One example of a qualitative research tradition is ethnography. The goal of ethnographic research was to describe and interpret a culture, social group, or system—in particular, to understand the meaning of behavior (actions), language, and interactions of the people the researcher was studying, traditionally people from primitive cultures. Given these goals, ethnographers employed a particular research strategy. This strategy typically involved a prolonged observation of the group through participant observation (or fieldwork) so that researchers could immerse themselves in peoples' day-to-day lives; if necessary, they learned the group's language to conduct both informal and formal interviews with group members. Researchers also made use of "artifacts" (things the people made or used) to better understand the culture, group, or system under study. In the 1920s and 1930s, sociologists at the University of Chicago adapted these anthropological methods to study cultural groups in the United States. Although the ethnographic tradition continues to evolve, many of its unique research methods, design features, and style of reporting results are currently used by researchers in a customary way. (See, for example, Ventres and Frankel 1996 for a brief description of ethnography and its potential application in primary care research).

Two aspects of qualitative research as historically described and practiced are particularly important for our discussion of criteria. First, to identify the similarities and differences between qualitative and quantitative research methods, authors often highlighted the different paradigms associated with them (e.g., see Pequegnat, Page, Strauss, et al. 1995; Patton 1990; and Lincoln and Guba 1985). Quantitative research was characterized as positivistic, deductive, hypothesis-driven, particularistic, variable-based, objective, and outcome-oriented. In contrast, qualitative research was characterized as phenomenological (i.e., an investigation of the meaning of experiences to people and of the process by which they arrive at that meaning), theory-building, holistic, case-based, subjective, and process-oriented. Despite authors' caveats that their characterizations of quantitative and qualitative research were general and idealized, many believed that the relationship between paradigms and methods was always true, and therefore that qualitative and quantitative methods could not be combined. Further on I discuss one way in which this problem was resolved.

Second, many practitioners of qualitative research and methods historically adopted the criteria rooted in the positivist paradigm to describe and evaluate their research despite seemingly incompatible philosophical perspectives. The aim of these qualitative researchers was to do "good positivist

research with less rigorous methods and procedures" (Denzin and Lincoln 1994, citing Becker 1993: 5).[9] Therefore, they emphasized the validity of their methods (rather than their reliability), the unique kinds of questions they could answer (e.g., how, what does it mean?), and the various strategies they developed to minimize bias and subjectivity. They also reframed the issue of generalizability from a question of the extent to which the results could be extended to a population or to phenomena across time and place, to whether the concepts and theories generated were applicable in similar contexts (i.e., transferable). In fact, a goal and hallmark of qualitative methods is the identification and refining of categories or types of social phenomena and the specific contexts in which types of behavior occur. Despite these methodological responses and the value of these early qualitative findings in many disciplines, it is easy to see how qualitative research was often viewed by positivist criteria as inferior to quantitative research.

There are three ways we can interpret the historic use of positivist criteria by many qualitative researchers. The first is that the practice was a necessary, but undesirable, feature of the "discourse of justification." In short, the discussion of qualitative research in positivist terms reflected the dominance of quantitative research in certain social science disciplines and the need to respond to criticisms of qualitative research in those terms. For example, qualitative researchers in sociology were frequently challenged by quantitative sociologists to define their paradigmatic perspective and to defend their methods, whereas relatively less pressure existed in anthropology to do so, because the philosophy and method dominated the field. Another interpretation is that many practitioners of qualitative research agreed with the tenets of the positivist paradigm despite philosophical and theoretical perspectives that, at a minimum, seemed to require their modification. Although the methods and procedures used to study subjective feelings and meanings were different, they could still be rigorous and scientific. However, it is important to note that even prior to the mid-1970s some qualitative researchers were arguing for a unique set of standards separate from positivist criteria (e.g., see Cicourel 1964). The third and final interpretation is that the adoption by qualitative researchers of positivist criteria solved important practical problems. These solutions include a framework and language for articulating complex, and at times unconscious, thought processes and methodological procedures; a shared language for discussing research with colleagues using quantitative methods; and a way to reduce the obstacles to combining qualitative and quantitative methods. As with many situations, there is perhaps some "truth" in each of these interpretations.

The desire to reduce barriers to combining qualitative and quantitative methods requires further comment given the interest in mixed methods, and their prevalence, in health services and policy research. I discuss this subject briefly here, before moving to a discussion of two forces that have stimulated other disciplines to reconsider the use of broad, positivist criteria in evaluating qualitative research.

In their now classic work entitled "Beyond Qualitative Versus Quantitative Methods," Reichardt and Cook (1978) argue that the advantages of combining qualitative and quantitative methods should compel disciplines (in their article, the field of evaluation research) to move beyond the traditional qualitative versus quantitative debate to an acceptance of both methods. The advantages they describe include the multiple purposes for which research is conducted, the complementary aspects of quantitative and qualitative methods, and triangulation (in this case, using more than one method to verify and validate results). Consequently, they conclude, researchers should use whatever methods are best suited to their research needs, regardless of their traditional methodological affiliations. Although the authors acknowledge that obstacles to combining qualitative and quantitative methods exist (i.e., time, money, lack of multi-methods training, and funding "fads"), they argue that in many circumstances the benefits far outweigh the costs.

Moreover, Reichardt and Cook (1978) contend that it is the confusion about the "real, but imperfect" link between paradigms and methods that increases the conflict between qualitative and quantitative researchers and that prevents them from combining these methods where useful. Methods and paradigms are logically separable. Although it is true that agreement between paradigm and method is frequent, other combinations are possible.[10]

Although the Reichardt and Cook (1978) article helped move the basic and applied social sciences from a "quantitative versus qualitative" paradigm debate to a "quantitative and qualitative" methods détente, it did not explicitly address two questions that have triggered and intensified arguments in the social sciences today. The first question is, What paradigm is adopted when qualitative and quantitative methods are combined? The authors do not explicitly state this, but the paradigm most frequently adopted when methods are combined is that associated with quantitative research. This includes the adoption of broad criteria that are traditionally used to evaluate quantitative research, as described earlier (see Figure 1). The only hint the authors provide that a shared paradigm might be problematic is in their brief discussion about how its absence among multi-disciplinary team members can impede the successful completion of a research project. (See Ianni and Orr 1978 and

Daly and McDonald 1992 on the challenges of working in multi-disciplinary teams; four recent articles on combining qualitative and quantitative research and methods in health services research are Barbour 1999; Morgan 1998; Stange, Miller, Crabtree, et al. 1994; and Ward 1993).

Second, what happens when more qualitative researchers begin questioning the adoption of the quantitative paradigm and the broad criteria associated with it, reasserting the uniqueness of the qualitative paradigm and advocating for a new set of criteria? Can the two paradigms, methods, and affiliated criteria be reconciled? The great debate currently taking place in the basic and applied social science disciplines has been triggered by the serious consideration of this second question, a subject to which we now turn.

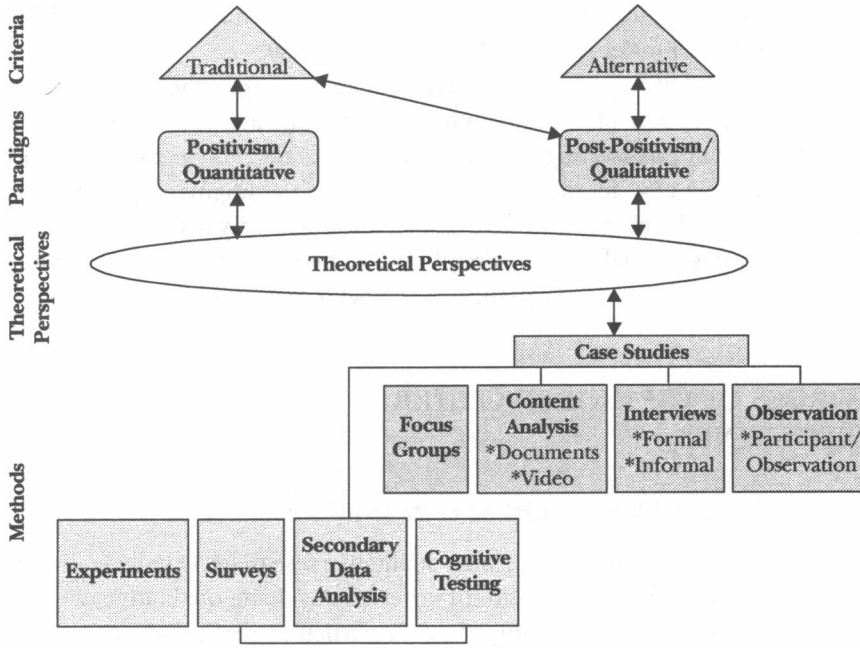
FORCES OF CHANGE IN OTHER DISCIPLINES

The Articulation of Alternative Criteria in the Social Sciences

In the late 1970s and early 1980s, some qualitative researchers challenged with renewed intensity the use of positivist criteria to evaluate qualitative work in light of the developments taking place in particular disciplines (especially anthropology and sociology) and the critiques of natural science developing in history and philosophy. They reasserted the view that qualitative research represented an alternative paradigm to that of quantitative research, and they forcefully argued that qualitative research and methods require a separate set of evaluation criteria. One philosophical position that re-emerged, and was further articulated, during this period is known as "post-positivism," resulting from an important modification to the positivist paradigm.[11] Although positivists contend that a concrete reality exists that can be studied, captured, and universally understood, post-positivists argue that social reality can never be fully apprehended, only approximated. As briefly discussed earlier, not only might individuals and groups have different interpretations of reality, but researchers cannot completely purge themselves of their own feelings and values. Consequently, they argued that the extent to which the social sciences can emulate the natural sciences (particularly idealized accounts of natural science) needed to be rethought.

In practice, the post-positivist paradigm often led to the development of slightly modified positivist criteria that were more in alignment with the worldview of qualitative research; specifically, criteria were adapted for the

Figure 1: The Relationship Between Methods, Theoretical Perspectives, Paradigms, and Criteria



more "naturalistic" research settings in which many types of qualitative research occur and the theoretical perspectives typically employed. As such, they were not viewed as being equally applicable to quantitative methods or capable of being value free. In addition, these broad criteria often took the form of a set of guidelines or questions (i.e., "desirable features" of qualitative research), acknowledging their emerging nature and the diversity of settings in which the range of qualitative methods are applied.

Hammersley (1992: 64) summarizes the post-positivist criteria as the ability of studies to:

- generate substantive and formal theory;
- be empirically grounded and scientifically credible;
- produce findings that can be generalized or transferred to other settings; and
- be internally reflexive in terms of taking account of the effects of the researcher and the research strategy on the findings that have been produced.

Note that these criteria highlight a major strength of qualitative research, which is the ability to generate substantive theories (i.e., in particular empirical areas, such as physician-patient communication) as well as formal theories (i.e., theory in more abstract areas of inquiry, such as authority and power).[12] In addition, although social reality is complex, consisting of multiple perspectives and meanings, findings must be empirically grounded and scientifically credible (i.e., produced in a rigorous and systematic way). Post-positivist criteria also often include the concept of transferability (i.e., the extent to which findings hold up in other settings or situations) as a substitute for generalizability. The criteria also emphasize that researchers must actively consider the effects of their personal characteristics and role in the research setting on the findings (i.e., they must be internally reflexive). In essence, one strategy for minimizing bias is to be always mindful of it and its possible effects on the research results. Finally, in later stages of the post-positivist tradition's development (late 1980s and early 1990s), some proponents argued that the criteria should incorporate an assessment of the value of the research for different groups, including the study "subjects" (e.g., see Lincoln and Guba 1989; Guba and Lincoln 1989).

An example of post-positivist criteria that may be familiar to health services researchers is one proposed by Lincoln and Guba (1985).[13] To establish the "trustworthiness" of findings from studies using qualitative methods, they propose that we assess the research in terms of its:

- *Credibility.* The "truth" of the findings, as viewed through the eyes of those being observed or interviewed and within the context in which the research is carried out.
- *Transferability.* The extent to which findings can be transferred to other settings. In order for findings to be transferable, the contexts must be similar. Therefore, it is the role of the researcher to identify key aspects of the context from which the findings emerge and the extent to which they may be applicable to other contexts.
- *Dependability.* The extent to which the research would produce similar or consistent findings if carried out as described, including taking into account any factors that may have affected the research results.
- *Confirmability.* Researchers need to provide evidence that corroborates the findings. Such evidence should come directly from subjects and research context, rather than the researcher's biases, motivations, or perspectives.

These criteria can be thought of as constructs parallel to internal validity, external validity (or generalizability), reliability, and objectivity. Lincoln and Guba (1985) go on to describe a variety of strategies that researchers can use to operationalize these concepts and, hence, to increase the trustworthiness of findings.

The Goal of Putting Research into Practice

Another force of change to existing, positivist criteria in other disciplines is greater discussion and debate about the main goals of research and the best means of achieving them. The challenge is that most disciplines have multiple goals, ranging from what has traditionally been called "basic" goals to the goals of "applied" research. In theory, disciplines "balance" these goals, but in practice this is difficult. As Patton (1997) notes in evaluation research:

> [Researchers] find themselves caught on the proverbial horns of a dilemma: Getting too close to decision-makers may jeopardize scientific credibility; remaining distant may undermine use.

As Patton's quotation implies, some goals challenge the central tenets of the positivist paradigm, particularly the norms and values that are exercised by researchers and the wider research community. Ironically, the goals that raise the greatest concern are those requiring researchers to work closely with the ultimate users of research, for example, the goal of increasing the probability that research results will be put into practice or that of increasing research users' knowledge. Some view these goals as undermining the main purpose of research, which is to increase knowledge as defined by a particular discipline or theory rather than users' knowledge. In addition, active engagement with the users of research disrupts the current norms of distance that traditionally govern the relationships among funders, researchers, and "subjects" that have been developed to minimize bias and reactive effects (i.e., the impact of the researcher on the research subject or "object"). Others argue that the unwillingness to actively consider how such pragmatic goals should inform research practice and criteria reflects idealized notions of how research is actually conducted and vague theories of how research results get put into practice (e.g., see Patton 1997 on utilization-focused evaluation). Moreover, there are "costs" associated with this philosophical perspective (i.e., poor internal validity and the lack of usefulness to users), as well as an implicit value system that places the usefulness of research results to users second to science. (See Reason 1994 and Thesen and Kuzel forthcoming, on participative inquiry.)

CRITERIA FOR EVALUATING QUALITATIVE RESEARCH IN HEALTH SERVICES RESEARCH

These forces of change are also affecting the field of health services research. Although the positivist criteria are most frequently used and familiar, post-positivist criteria have been proposed in some subfields. The appendix contains three sets of criteria for evaluating qualitative research that have been proposed in medicine and primary care journals. They were chosen to illustrate the range of criteria currently proposed in health services research.[14] Mays and Pope (1995) is based on the traditional, positivist philosophy, and the other two (Inui and Frankel 1991; Kuzel et al. 1994) are rooted in post-positivist philosophy, explicitly drawing on the work of Lincoln and Guba (1985).[15] Before moving to a discussion of the advantages and limitations of adopting either one of these broad sets of criteria, or some combination of the two, we discuss their similarities and differences. There are many commonalties, but some important differences as well.

Similarities and Differences

To compare these three sets of criteria, I identify six general areas in Table 1. These include (1) the way in which the primary research question is stated; (2) a description of the context in which the research occurs; (3) aspects of the qualitative research design; (4) strategies and techniques for enhancing rigor; (5) presentation and assessment of manuscripts and results; and (6) the values and objectives that guide the research. In each of these six areas, I identify the similarities and differences among the three sets of criteria. I also note key assumptions that underlie them, identify issues that remain unaddressed despite commonalities, and discuss potential difficulties of using some of the specific criteria.

The Research Question. Both sets of criteria in the post-positivist tradition (Inui and Frankel 1991; Kuzel et al. 1994) note the importance of clearly stating the research question. They also note that the investigator's perceptions and assumptions should be articulated at the outset of the study, as well as throughout the research process.

In contrast, the criteria proposed by Mays and Pope (1995) recommend that an account be given of the theoretical framework and methods used throughout the research process. This criterion is both a reflection of traditional criteria and an important modification to them.The salience of the theoretical framework used to answer the research question reflects a

Table 1: Criteria for Evaluating Qualitative Research: Similarities and Differences

Six Areas	*Similarities*	*Differences*
1. Research Question	• Clearly stated and important research question • Investigator's perceptions and assumptions clearly stated	• Make explicit the theoretical framework used at every stage of the research • Investigator's perceptions and assumptions not explicitly noted
2. Context	• Clear and detailed description of the study context • Clear and detailed description of the investigator's role in the context • Clear delineation of how the context affects the ability to answer the original research question	
3. Research Study Design Sampling Strategy Data Collection Methods Data Analysis Methods	• Overall, the research strategy most appropriate for answering the question should be used • Clear description of the purposive sampling strategy used and why it was selected • More detailed criteria for data collection and analysis methods not given	• Concern with ensuring conceptual generalizability
4. Strategies and Techniques for Enhancing Rigor [See Table 2 for a brief description of each strategy]	• Triangulation • Search for disconfirming evidence ("deviant" or "negative" cases) • Subject review (also called "member checking" or dialogue with participants) • Data archiving/creating an audit trail • Skeptical peer review • Reflective journal keeping	• Two techniques recommended that need to be used with caution –Testing qualitative results with quantitative data –Having another investigator repeat the analysis
5. Presenting and Assessing Manuscripts and Results	• Clear, jargon-free writing • Original evidence sufficient to convince a skeptical reader • Final results are credible given question, research design, and strategies employed • Coherence and integrity of research on its own and also understood in the context of prior work • New perspectives uncovered in the research and point to future work	• Presentation style not addressed • Robustness of results not directly assessed
6. Values and Objectives Guiding the Research	• Not explicitly stated, except by Kuzel et al. (1994)	

See notes 11, 13, and 15 for a discussion of the meaning of the term post-positivist by this article author and those cited in this table.

key tenet of positivist philosophy (see the discussion of the fourth positivist element in the previous section). However, rather than assuming that a theory is fixed at the beginning of the study, the criteria acknowledge that in some qualitative research (e.g., grounded theory) theory is developed and refined through the research process. As noted previously, theory can be an outcome of an iterative, qualitative research process rather than the starting point for a more sequential one.

Criteria proposed by Mays and Pope (1995) do not include the articulation of investigators' perceptions and assumptions. Perhaps these authors believe that sufficient knowledge of at least the investigator's initial assumptions can be gleaned by understanding their theoretical framework. However, a theoretical framework may not be appropriate or required if the goal of the research is to understand and interpret the meaning of an event for a particular group of people (e.g., what it is like to be a young African American male diagnosed with AIDS).

Context. All three criteria note the importance of understanding the context in which the research is carried out. In qualitative research there are often many more "variables" in the context than cases; therefore, part of the research process is identifying those aspects of the context that are most important for understanding the phenomenon under study (see the Ragin, Yin, and Sofaer articles in this issue). A detailed description of the research context is necessary to assess the credibility of the research results and to determine whether and to what extent they are transferable (or generalizable) to other settings.

Four aspects of the research context are important. The first is the physical setting, a detailed account describing where the research was conducted. The second is the investigator's role in the setting. From these first two aspects derives a third, which is a discussion of how the setting and the investigator's role in it may influence the nature and types of data collected and, hence, the results: in particular, whether the researcher was able to gain sufficient access and spend enough time to develop an intimate understanding of the setting and the phenomenon of interest. Finally, it is important to understand the "history of the inquiry," including any events over time that may have changed the nature of the study or may have affected the results. See Sofaer, Patton, and Yin (this issue) for a discussion of these issues.

Qualitative Research Study Design. A third similarity among the criteria is their emphasis on the link between the research question and study design. In short, as is true in any research endeavor, the research design should be appropriate for the question of interest.

As in quantitative research, key features of a qualitative research study design include the sampling framework employed, data collection methods, data types and sources used (given the context), and data analysis methods. Perhaps more frequently than in quantitative research, qualitative research designs evolve during data collection and analysis.[16] Therefore, it is critical to understand how and why the study design changed, whether and to what extent the change influenced researchers' ability to answer the original study question, or whether a new study question emerged during the research process and how the researcher proceeded. See Yin (this issue) for a discussion of these issues in case studies.

One key difference among the three sets of standards concerns the criteria for assessing the sampling strategy. Mays and Pope (1995) emphasize that the sample should be "theoretically comprehensive to ensure the generalizability of the conceptual analysis (diverse range of individuals and settings, for example)." By "theoretically comprehensive," the authors are referring to a specific type of purposive (or non-probability) sampling technique in which the objective is to develop theory or explanation (see Glaser and Strauss 1967). In addition, they also weigh the generalizability of the theory or explanation.

In contrast, Inui and Frankel (1991) and Kuzel et al. (1994) discuss purposive, or non-probability sampling strategies that are appropriate for the research question. These may or may not involve a theoretically comprehensive sampling strategy and generalization as traditionally described. See Ragin (this issue), Patton (1990), Kuzel (1992), and Miles and Huberman (1994) for a discussion of purposive sampling strategies in qualitative research.

A key similarity of these broad criteria is that they do not include detailed criteria for data collection and analysis. Such criteria would be far too detailed (e.g., see Creswell 1998: ch. 10; Miles and Huberman 1994; Bryman and Burgess 1994; Corbin and Strauss 1990; Strauss 1987). Consequently, all three criteria emphasize general strategies and techniques for enhancing the quality of qualitative research, a subject to which we now turn.

Strategies and Techniques for Enhancing Rigor. These strategies and techniques are designed to deal with common problems in research, and each of them can be mapped back to the four broad criteria discussed in the previous section (see Table 2; see also Kuzel 1998 for a similar framework). Many of these strategies should be employed throughout the research process, and some can be utilized after the research is completed. Patton (this issue) and Yin (this issue) describe most of these strategies and techniques, so we only briefly describe them in Table 2. (For further detail, see Caudle 1994; Kuzel

Table 2: Strategies for Enhancing the Rigor of Qualitative Research

Criteria	*Strategies*
• Credibility/Internal Validity	• Triangulation. The purpose of triangulation is to make use of multiple data sources, investigators, methods, or theory to the extent possible to provide corroborating evidence. • Search for Disconfirming Evidence ("deviant" or "negative" cases). Instead of ignoring cases or information that "doesn't fit," the researcher actively looks for cases that do not fit the pattern and refines the theory and working hypotheses in light of this evidence. The researcher(s) continues this process until all cases fit, eliminating all outliers and exceptions. • Subject Review (Also called "member checking" and "dialogue with participants"). The researcher(s) solicits research "subject," group member, or participant views of the credibility of interpretations and findings. In some cases, this strategy is also used to increase the probability that research results will be used.
• Transferability/External Validity	• Detailed Description of the Context (see Table 1).
• Dependability/Reliability	• Data Archiving/Creating an Audit Trail. The researcher(s) should ensure the completeness and accuracy of documents (e.g., interviews, observations, etc.) and be clear about the coding schemes and data analysis process. Theoretically, this would allow someone not connected with the study to review the primary documents and coding schemes to assess whether the findings, interpretations, and conclusions are supported. • Skeptical Peer Review. A skeptical peer-reviewer plays the role of devil's advocate, asking difficult questions about methods, meanings, and interpretation of the data. This process provides an external check on the research.
• Confirmability/Objectivity	• Triangulation. See description above. • Skeptical Peer Review or Audits. See above. • Search for Disconfirming Evidence or Negative Cases. See above. • Reflective Journal Keeping by the Researcher. Because the researcher is the research instrument in qualitative research, he or she should keep journal notes on how his or her personal characteristics, feelings, and biases may be influencing the work and how he or she tries to manage them to the extent possible.

and Like 1991; Patton 1990; Silverman, Ricci, and Gunter 1990; Lincoln and Guba 1985).

Mays and Pope (1995) emphasize two strategies that the other two do not, given the broad evaluation criteria to which they adhere. The first is that the analysis be "repeated by more than one researcher to ensure reliability." Replication is infrequent and difficult in quantitative research and is even more difficult in qualitative work (see Bryman 1988 on "replicability" versus "replication"). First, the analysis would have to be repeated by a researcher who shares the same theoretical tradition and paradigm, because two researchers employing the same qualitative method but differing in their theoretical perspectives may collect and analyze data very differently (see Kuzel and Like 1991; Athens 1984, for examples). Second, in qualitative research, data collection and analysis often occur simultaneously rather than sequentially; therefore, the data themselves reflect decisions made during the research process. It would not be possible to discern "the road not taken" and how it would have influenced the results, except through the reflective journal notes and audit trail of the investigator (see general strategies and techniques in Table 2). Third, could a researcher unfamiliar with the context truly analyze the data? "Repeating" an analysis in the sense of "walking a mile in the qualitative researcher's shoes" may not be possible, except perhaps by other research team members. Otherwise, the researcher employs skeptical peer review. Finally, some qualitative researchers would question whether replication should be a goal or strategy of qualitative research at all, given the dynamic, socially constructed nature of reality.

A second strategy that Mays and Pope (1995) suggest, in contrast to the other two, is that of using quantitative data to "test qualitative conclusions, where appropriate." While it can be valuable to use different methods to address the same question, some argue that researchers have to be particularly careful about using quantitative data to "test" qualitative results. Results generated from studies employing different methods, traditions, and paradigms may not converge for a number of spurious reasons (see Ragin and Patton this issue; Kuzel and Like 1991; Mechanic 1989). In addition, this criterion implies that qualitative research results cannot stand on their own; they are legitimate only if they have been tested with quantitative methods or are part of quantitative research project.

Presenting and Assessing Manuscripts and Findings. All three sets of evaluation criteria are designed primarily for assessing completed qualitative work, specifically journal manuscripts. However, they vary to some extent on their focus. Inui and Frankel (1991) focus on the inferences and conclusions drawn

in manuscripts; therefore, they have five criteria for assessing the trustworthiness of qualitative research results (see the appendix). They were also serving as journal editors at the time they proposed these criteria; therefore, they have recommendations for authors regarding presentation style (e.g., brevity, clarity, and accessibility).

In contrast, Kuzel et al. (1994) collapse the desirable features of "the inquiry and report." While they too recommend clarity—in particular the avoidance of jargon—they return to two main criteria for assessing a final report. The first is internal and external coherence (i.e., effectively interpreting the context, the "fit" between purpose and style of investigation, and their relationship to the bigger picture). The second is whether, and to what extent, four key techniques (or strategies) of inquiry were used (see appendix).

Mays and Pope (1995) and Kuzel et al. (1994) emphasize strategies and techniques, rather than the findings or conclusions directly. A "good" study is one that has employed the strategies embedded in the criteria. While not explicitly included in their criteria, Mays and Pope (1995) recommend that manuscript authors separate the data, the analytic framework used, and their interpretations and results. These distinctions may make it easier for reviewers and readers to assess the quality of a study; however, they are not easy to achieve and may not ultimately be useful given the need to keep findings in context, including the sequence in which events occurred.

None of the evaluation criteria explicitly refer to the "voice" of the researcher in the text (first person, third person) or the research "subjects" (that is, present at all, and if so, how), although this topic receives a great deal of attention in the basic social sciences (e.g., Richard 1994; Clifford and Marcus 1986; Van Maannen, 1988; Mishler 1986). However, given their underlying post-positivist framework, Inui and Frankel (1991) and Kuzel et al. (1994) more likely may argue that the author's voice should be an integral part of the presentation (see Frankel forthcoming). In contrast, Mays and Pope (1995) may prefer that the author assume the formal style of a scientific journal article. The only time the voice of subjects is mentioned is in the context of supporting evidence. Mays and Pope (1995) note that sufficient original evidence (e.g., direct quotations) should be presented systematically to satisfy the skeptical reader regarding the relation between the interpretation and the evidence.

Finally, none of these criteria propose a different structure for reporting qualitative research results, despite noting the tension between the desire for detail and the need for brevity.[17] A major question is whether qualitative research is amenable to the journal format, and if so, whether there are

changes in conventions or practices that would make it easier for readers to assess the quality of the qualitative research published in them. Inui and Frankel (1991) note that:

> It is not an accident that the basic "unit of scholarship" in qualitative research is considered by many to be the book, not the article. The book is the meal; articles no more than the tasty hors d'oeuvres. Whatever the degree of difficulty, we nevertheless believe that meaningful material from qualitative research can be presented in journal article length.

Mays and Pope (1995) delineate a number of practices that journals could explore to address space constraints (i.e., making the full transcript of the raw data available to the reader on microfilm or computer disk or presenting sequences from the original data accompanied by detailed commentary from the researcher). They also suggest a strategy that qualitative researchers could use to reduce their data to a format amenable to journals (i.e., search for ways to reduce the data, including quantitative summaries of the results), although they acknowledge the potential limitations of this approach. (See Frankel's project cited and described in Hurley, this issue, for an example).

The Values and Objectives Guiding the Research. The three sets of criteria differ in the extent to which they explicitly comment on the values and objectives that inform the research. As noted previously, some argue that goals and values are inextricably linked with evaluation criteria and that, therefore, they should be clearly stated. Kuzel et al. (1994) make a noteworthy and clear statement of the values guiding their inquiry and desired outcomes for research participants and readers.

Advantages and Limitations of Three Major Alternatives

Similar to the basic disciplines on which it rests, two broad criteria for assessing qualitative research in health services research currently exist: positivist and post-positivist. Given this, there are three alternatives for the field to consider, each of which has potential advantages and limitations.[18]

One alternative is for the field to continue using broad, positivist criteria. The "familiarity" of such criteria is a significant advantage. Introductory social science methods texts almost always have a chapter on the scientific method, including norms and values that govern the scientific community. In addition, this framework is a familiar one shared by many in the clinical sciences because of their affinity with the natural sciences. Another advantage of the continued use of these positivist criteria is that they help resolve a

number of difficult pragmatic problems that include articulating the logic of qualitative research and methods, facilitating dialogue between qualitative and quantitative researchers, and reducing barriers to combining qualitative and quantitative methods. Finally, the philosophical ideas that underlie the criteria are widely accepted and respected in the wider society despite the critiques of science and debates about the extent to which the positivist approach can be applied to studies of the social world that are occurring in the academic literature.

The continued use of positivist criteria has three limitations, however. First, when positivist criteria are adopted, qualitative methods may always seem less rigorous than quantitative methods. Consequently, qualitative research and methods may not be sufficiently utilized given the types of research questions that are prevalent in the field. Further, qualitative research results may not be disseminated as widely and effectively as possible. Second, the adoption of positivist criteria may restrict the types of questions that can legitimately be asked and may weaken the classic strengths of qualitative research (e.g., discovery, theory-building), rather than strengthening them. When qualitative research must justify its rigor using concepts derived from the quantitative research paradigm, it may be used in more structured ways or, as Sofaer (this issue) notes, with "less peripheral vision." Third (and related to the previous two limitations), positivist criteria may lead to the misapplication of methodological techniques (e.g., testing qualitative results with quantitative data) or tools. For example, in order to mimic quantitative research, qualitative researchers may use computer programs not only to manage and organize data but, further, to "quantify" qualitative data analysis and results. In some cases this may be beneficial and appropriate, but in others it may be harmful and inappropriate (see Cicourel 1964 for a critique of reducing "lived experiences" to numbers and Geertz 1973 on the need for "thick description.") A number of potential analytic and practical pitfalls with computer software also exist that users must be aware of (see Weitzman, this issue; Dohan and Sanchez-Jankowski 1998; Richards and Richards 1994).

The second major alternative is to consider the adoption of new, post-positivist criteria for evaluating qualitative research. This option has three potential advantages. First, qualitative research will be judged on its own merits. Rather than adapting the method to meet the criteria, the criteria are customized for the purpose and nature of the research and methods used. Second, researchers, reviewers, and readers may find these criteria more useful for assessing qualitative research. Finally, the major strengths of qualitative research may more likely be preserved. A broader array of

qualitative research may be viewed as acceptable through the use of such criteria because the criteria have been modified to allow their inclusion, not because the method is less rigorous.

The potential limitations of this alternative are threefold. First, different broad criteria would be used to evaluate qualitative and quantitative research, which either would require a third set of criteria for assessing mixed-methods research or would pose a significant practical problem. As noted, post-positivist criteria do not claim to apply equally to both modes of inquiry. Second, the use of different criteria for evaluating qualitative research may only heighten any existing skepticism about the rigor of qualitative research. Rather than viewing these criteria as separate, but equally rigorous frameworks or systems for examining qualitative research, one could interpret these criteria as a separate and inferior system for judging research. Finally, post-positivist criteria are less familiar to health services researchers, although proponents of such criteria often create concepts parallel to those posited in the positivist paradigm. It would take time to familiarize the field with the criteria and with theoretical traditions and paradigms on which they are based.

A third alternative is to use positivist and post-positivist criteria as complementary systems. This could be accomplished practically in one of two ways. The first would be to use whatever set of criteria coincided with the investigators' own account of the research question and their proposed approach to answer it. For example, if an investigator stated that she was conducting case study research in a positivist framework (e.g., testing hypotheses derived from economic theory about the relationship between market dynamics and organizational forms), the work would be judged using those criteria. Conversely, if the investigator stated that he was conducting an ethnographic study in a post-positivist tradition (e.g., understanding ways in which persons with multiple chronic illnesses cope at work and home), post-positivist criteria would be employed to evaluate the research. In short, the investigator's conceptualization of the research question, design, and methods would determine which set of criteria was used. The second way of combining systems would be to identify a "core set" of criteria, and to use "supplemental" criteria as needed. As the comparison of the three specific criteria show, many similarities exist between these two positions. "Supplemental" criteria can be used to assess particular qualitative research studies as described earlier.

The major advantage of this third alternative is that it does not impose a uniform standard on all research. Rather, it acknowledges two different, but legitimate research strategies (qualitative and quantitative) and the presence of a range of qualitative research methods that will be used in a variety of

different ways given the research question and the theoretical and philosophical perspective of the investigator. The health services research community can also take advantage of the development of rigorous, yet more customized, criteria for evaluating qualitative research—criteria that have been developed in the basic social sciences.

The primary limitation of this alternative is its complexity. Moreover, this alternative requires overcoming two of the three limitations of adopting post-positivist criteria noted in this article (i.e., lack of familiarity and skepticism).

CONCLUSION

The extremely diverse field of health services research is relatively young: it celebrated its professional association's 16th anniversary (the Association for Health Services Research) just this last summer. The explicit discussion of the contributions that qualitative research and methods have made to the field, and can make in the future, are just beginning. For this discussion to be productive, it must be informed by an understanding of the nature of qualitative research, particularly the purposes for which qualitative methods are best suited and the "real but imperfect links" between criteria, paradigms, theoretical perspectives, and specific qualitative research methods. In addition, there is a great need to develop a stronger consensus about the criteria to use in evaluating qualitative research given the three major alternatives outlined in this article. Although dialogue may at times be difficult, there are many areas of agreement with which to begin, and the challenge of understanding and improving our nation's health care system should compel the field to actively consider, and constructively debate, these issues. In addition, the field has the opportunity to take advantage of lessons learned in other multidisciplinary, applied fields (i.e., evaluation research) that are striving to use diverse paradigmatic perspectives to sharpen methodological thinking, clarify research purposes and strategies, and provide insight and answers to difficult questions.

This Special Supplement issue represents a critical first step in the process. However, further consideration of the role of qualitative research and methods in health services and policy research, and of the criteria for evaluating such research, requires a collective and "qualitative" process if the wider health services research community is to be engaged. The Agency for Health Care Policy and Research (AHCPR) is exploring the role it can play

in this process and the most appropriate mechanisms for doing so (e.g., work group, follow-up conference, education and training). The health services research community needs to address four major areas.

The first area is education. What is the best way to familiarize the field with the range of qualitative research methods (e.g., interviewing, observation, focus groups, case studies) and traditions in which they are frequently utilized (e.g., case studies, ethnography)? Further educating the field of health services research is challenging because it is eclectic in theory and in method. To date, the process of making qualitative research and methods more accessible to the health services research community has been accomplished primarily through published literature that describes the qualitative research traditions and methods of greatest use in particular areas of health services research (e.g., see Sofaer, Hurley, and Ragin in this issue; past and forthcoming issues of the journal *Qualitative Health Research*; Crabtree and Miller forthcoming; Elder and Miller, 1995; Miller and Crabtree 1994; Green and Britten 1998; as well as the series of articles in vol. 311 of the *British Medical Journal*). However, this process could be expanded and accelerated. In addition to making these ideas more accessible to a health services research audience, what steps should be taken to improve the knowledge and use of qualitative and mixed-methods research in health services and policy research training and continuing education programs?

The second area involves developing a stronger consensus about criteria for evaluating completed qualitative and mixed-methods research (e.g., manuscripts, final reports). This includes making health services researchers more familiar with the common criteria discussed in this article and developing a mechanism to resolve existing areas of difference. Using this article and others (e.g., Frankel forthcoming), journal editors and the wider health services research community may wish to articulate more clearly the criteria for evaluating completed qualitative research. This includes identifying criteria for evaluating the specific qualitative research methods and traditions most frequently employed in health services research. None of the three proposed criteria discussed here is completely generic: they are all less suited for qualitative research studies that employ a single qualitative method (e.g., elite interviewing), take place in more controlled settings (e.g., focus groups), and occur over relatively short periods of time. Finally, the field would benefit from discussing three related questions: (1) Are additional criteria or guidelines needed to assess mixed-methods research or research carried out in large, multidisciplinary teams? (2) What rationale and standards

should be used to synthesize qualitative research results? and (3) Would the field benefit from the development of ethical standards and guidelines for particular types of qualitative research? Examples of the latter would be evaluations of programs or interventions that are very sensitive politically (see Patton 1997 on this subject) or qualitative research that requires the researcher to negotiate access to, and to work closely with, certain types of "subjects" (e.g., for-profit organizations or vulnerable individuals and groups).

A third potential area for the field to address is identification of the criteria that should be used to evaluate grant applications that employ qualitative research methods. Clearly, the broad criteria for evaluating manuscripts discussed in this article provide some insight into elements that should be contained in a research proposal. However, as noted earlier, these criteria may not be equally applicable to the diverse array of qualitative research and methods. In addition, qualitative research questions and designs often evolve during the research project, potentially making it more challenging to assess qualitative research proposals. Further discussion of what reviewers should be looking for in qualitative research applications, and conversely what grant applicants should include, would be extremely valuable (see Yin in this issue for a discussion on evaluating proposals that use case studies, and Morse 1994 on writing fundable qualitative proposals).

The final area to address concerns additional ways for the field to foster a greater understanding and an improved use of qualitative research and methods. This might include discussion about the most desirable—and feasible—mechanisms for presenting qualitative research results and supporting data. For example, the *Journal of Family Practice* is making available on its Web site longer versions of the qualitative articles it publishes. Another potential subject is the possibility of creating qualitative research databases that could be shared since data collection is the most time-intensive and costly aspect of qualitative research.

AHCPR is interested in receiving input from the research community on the next steps it could take to help address these important and challenging issues—in particular, the two most important activities the agency could undertake to advance the field's knowledge and use of qualitative research and methods over the next several years. The most immediate step that the agency is considering is the formation of a work group to develop criteria for evaluating qualitative research grant applications and guidelines for health services researchers on how to write a strong qualitative research application. Please direct your comments and suggestions to qualrsch@ahcpr.gov.

Appendix A: Three Sets of Criteria for Evaluating Qualitative Research

Positivist

Mays and Pope (1995a) Questions to Ask of a Qualitative Study

- Overall, did the researcher make explicit in the account the theoretical framework and methods used at every stage of the research?
- Was the context clearly described?
- Was the sampling strategy clearly described and justified?
- Was the sampling strategy theoretically comprehensive to ensure the generalizability of the conceptual analyses (diverse range of individuals and settings, for example)?
- How was the fieldwork undertaken? Was it described in detail?
- Could the evidence (fieldwork notes, interview transcripts, recordings, documentary analysis, etc.) be inspected independently by others; if relevant, could the process of transcription be independently inspected?
- Were the procedures for data analysis clearly described and theoretically justified? Did they relate to the original research questions? How were the themes and concepts identified from the data?
- Was the analysis repeated by more than one researcher to ensure reliability?
- Did the investigator make use of quantitative evidence to test qualitative conclusions where appropriate?
- Did the investigator give evidence of seeking out observations that might have contradicted or modified the analysis?
- Was sufficient original evidence presented systematically in the written account to satisfy the skeptical reader of the relation between the interpretation and the evidence (for example, were quotations numbered and sources given)?

Post-Positivist

Inui and Frankel (1991) Desirable Features of Qualitative Research Methods

- Clear and important question
- Appropriate:
  - –Sampling Strategy
  - –Data type(s), sources
  - –Data gathering methods
  - –Analysis Methods
- Provision for:
  - –Data archiving
  - –Investigator journal keeping
  - –Skeptical peer review
  - –Subject review
  - –Consideration of contrary data/cases

Desirable Features of Manuscripts Describing Qualitative Research Results

- Description of:
  - –History of inquiry
  - –Investigator's role, perceptions at research inception
  - –All methods elements noted above
- Strong, trustworthy inferences/conclusions, notable for:
  - –Richness
  - –Coherence, integrity
  - –Relatedness, boundedness
  - –Salience, verisimilitude
  - –Generativity
  - –Brevity, clarity, accessibility

Post-Positivist

Kuzel et al. (1994) Features of Good Qualitative Inquiry in Family Medicine

- Values that guide inquiry:
  - –Empathy (for research participants)
  - –Collaboration (with participants, and with colleagues and critics)
  - –Service (in the sense of shared power)
  - –Moral sensitivity (having a notion of greater good)
- Characteristics of the inquiry and report:
  - –Clarity
    - –Assumptions, explicitly stated
    - –Purpose, explicitly stated
    - –Language, avoidance of jargon
  - –Coherence
    - –Internal, effectively interprets the context; fit between purpose and style of investigation
    - –External, relates to the context of the bigger picture
- Techniques of inquiry:
  - –Dialogue among participants
  - –Triangulation of sources and investigators
  - –Sampling that looks for confirming and disconfirming evidence
  - –Immersion in the context of inquiry (method specific)
- Outcomes:
  - –For participants, new knowledge and behavior that is useful
  - –For readers, vicarious experience and learning

See notes 11, 13, and 15 for a discussion of the meaning of the term post-positivist by this article's author and those cited in this table.

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NOTES

1. This article focuses on criteria for reviewing completed qualitative research from a single study. A related challenge is how to systematically review multiple qualitative studies. Interest in systematic reviews of the literature, and in the methodology for conducting them, has been growing because of the increased emphasis on evidence-based practice. See Dingwall, Murphy, Watson, et al. (1998) for a discussion of the role of qualitative work in relation to Cochrane's research agenda for health services research and Popay, Rogers, and Williams (1998) for a discussion of criteria for the systematic review of qualitative literature in health services research.
2. The term *philosophical perspective* is defined as the ontological (i.e., the form and nature of reality) and epistemological (i.e., what is knowable and what is the relationship between the knower and social reality) perspective that underlies methods. As we discuss in the following paragraph, the term *paradigm* can also be used to refer to the "world view" underlying methods; therefore, we use these terms interchangeably throughout the manuscript. For a discussion of the broad philosophical perspectives informing quantitative and qualitative research, see the following two sections of this article and the cited references. The term *theoretical perspective* is used to refer to a general, a priori idea of how the social world works (e.g., symbolic interaction), even if the perspective emphasizes that particular theories must be developed inductively from empirical research. See the section entitled, "Forces of Change in Other Disciplines," and cited references for a discussion of the role of theoretical perspectives and theory in qualitative research.
3. Ragin (this issue) provides a third definition (i.e., a research strategy that is utilized to achieve particular goals). In addition, he uses different terms ("case-oriented" and "variable-oriented" research) to avoid eliciting the stereotypes typically associated with qualitative and quantitative research. Yin (this issue) stresses a similar feature of case studies, defining them as a research design rather than as a method.
4. Patton (this issue) notes that the debate in evaluation research has "softened" over the last two decades, in part due to the practical problems the field faces. As we discuss in the conclusion, this point may be particularly relevant for the multidisciplinary and applied field of health services research. See Patton (1997) and Reichardt and Rallis (1994) for further discussion of the debate in evaluation research, and for ways that qualitative and quantitative researchers in this field are overcoming differences.

5. In contrast, research and evaluation contracts sponsored by policymakers often explicitly ask for the inclusion of qualitative research in order to assess needs and to understand how programs have been implemented, why they are or are not working, and for whom they work better or worse (see, e.g., Hurley, this issue). However, reports from these contracts may not always be published in the peer-reviewed literature. In addition, when such reports are published they may highlight the quantitative component of the study (if one existed) and contain little detail about the qualitative component and how it was used in the overall study design.
6. This discussion of positivism and its relationship to quantitative methods and broad evaluation criteria draws heavily on the work of Bryman (1988: ch. 2). Others discuss these issues as well, but I found this explication particularly clear. Moreover, I share his perspective that the relationship between paradigms, theoretical perspectives, and methods are not as deterministic as some authors argue.
7. The role of theory in qualitative research is different than in quantitative research in the sense that it can be the outcome of the research project as well as a starting point. See Creswell (1998: ch. 4, 5) and Denzin and Lincoln (1994: ch. 1) for a discussion of theoretical perspectives in qualitative research, and Morse (1997) on theory derived from qualitative research and criteria for evaluating it. More broadly, see Becker (1998: ch. 2) on "imagery," and Ragin (1994: ch. 3) on the relationship between "analytic frames" and "images" in social research.
8. Note the affinity between the concept of "traditions of inquiry" and their impact on research design with Ragin (this issue) and Yin's (this issue) definition of qualitative research discussed above in note 3. See Creswell (1998: ch. 1) and Denzin and Lincoln (1994: ch. 1, 6) for a discussion of other attempts to cluster the diverse range of philosophical and theoretical perspectives associated with qualitative research into meaningful types or families.
9. Some examples of methodological work on enhancing the reliability and validity of qualitative research methods in this tradition include Becker (1958, 1970), Glaser and Strauss (1967), LeCompte and Goetz (1982), Kirk and Miller (1985), and Yin (1994).
10. Reichardt and Cook (1978) did not discuss theoretical perspectives and their links to paradigms and methods nor the links between paradigms and evaluation criteria. However, their argument about the "real but imperfect" links between paradigms and methods could be extended to include them (see Figure 1).
11. One meaning of the term *post-positivist* is any philosophical perspective that challenges tenets of positivist philosophy and criteria. However, I use the term here to refer to a particular philosophical position. It is important to note that the term *social constructionist* (e.g., see Berger and Luckman 1967) is often used synonymously with post-positivist, but more recently these perspectives have been distinguished by some. See note 14 further on for a description of these two perspectives, particularly the evolution of Lincoln and Guba's use of the terms (i.e., post-positivist and constructivist). Finally, see Denzin and Lincoln (1994), Hammersley (1992), and Clifford and Marcus (1986) for a discussion of other philosophical and theoretical perspectives (e.g., post-modernism, post-structuralism, and critical theory) that existed historically in the social sciences

or emerged during this period. It is not possible to describe these perspectives or to discuss whether, and to what extent, they can contribute to the development of criteria for evaluating qualitative health services research in this article.

12. See Guba (1981), Athens (1984), Howe and Eisenhardt (1990), Hammersley (1998, 1992), and Altheide and Johnson (1994) for specific examples.
13. Lincoln and Guba (1985: p. 46) note that they use the term post-positivist in a particular way, specifically to refer to paradigms that represent "genuine breaks with the positivist tradition." In addition, their views have evolved over time. As a result, in later writings they refer to their own philosophical perspective as constructivist (see Guba and Lincoln 1994). In this article, post-positivist refers to their early views and constructivist refers to their later views. They characterize the constructivist perspective as having a more relativist ontology (i.e., local and specific constructed realities) and a "transactional and subjectivist" epistemology (i.e., the investigator and object of inquiry are assumed to be interactively linked so that "findings" are literally created as the investigation proceeds). In contrast, they characterize the post-positivist perspective as having a critical realist ontology (i.e., reality is assumed to exist but is subject to only imperfect apprehension) and a "modified dualist/objectivist" epistemology (i.e., the investigator and object of inquiry are not independent but objectivity remains an ideal).
14. For other examples of criteria for evaluating qualitative research not inconsistent with those discussed here, see Frankel (forthcoming), Thorne (1997), Fitzpatrick and Boulton (1996), Elder and Miller (1995), and Dreher (1994).
15. See Kuzel and Like (1991) as well. Kuzel (personal communication, May 30, 1999) notes that he would characterize the philosophical views underlying his proposed criteria as constructivist. Frankel (personal communication, August 8, 1999) notes that he would characterize the philosophical views underlying his proposed criteria as post-positivist.
16. For a fascinating discussion of the evolution of a quantitative research design in light of problems discovered in the data and threats to the interpretation of results uncovered by qualitative case studies, see Luft (1986).
17. See the editorial by Reid (1996) in the *Canadian Family Physician,* which proposes the following manuscript sections: Purpose, Design, Setting, Participants, Method, Main Findings, Conclusion.
18. I believe that the existence of diverse criteria for evaluating qualitative research, and the major alternatives that result, represent an opportunity for the field to review the paradigmatic assumptions on which the field rests and to strengthen both qualitative and quantitative methods. In contrast, Poses and Isen (1998) view this diversity as undermining the credibility of qualitative research. See also the replies to Poses and Isen (1998) by Robling, Owen, Allery, et al. (1998).

REFERENCES

Altheide, D. L., and J. J. Johnson. 1994. "Criteria for Assessing Interpretive Validity in Qualitative Research." In *The Handbook of Qualitative Research,* edited by N. K. Denzin and Y. Lincoln, pp. 485–500. Thousand Oaks, CA: Sage.

Athens, L. 1984. "Scientific Criteria for Evaluating Qualitative Studies." In *Studies in Symbolic Interaction,* edited by N. K. Denzin, pp. 259–68. Greenwich, CT: JAI Press.

Barbour, R. S. 1999. "The Case for Combining Qualitative and Quantitative Approaches in Health Services Research." *Journal of Health Services Research and Policy* 4 (1): 39–43.

Becker, H. S. 1998. *Tricks of the Trade: How to Think About Your Research While You're Doing It.* Chicago: University of Chicago Press.

———. 1993. "The Epistemology of Qualitative Research." Paper presented at the MacArthur Foundation Conference on Ethnographic Approaches to the Study of Human Behavior, Oakland, CA.

———. 1970. *Sociological Work: Method and Substance.* New York: Aldine.

———. 1958. "Problems of Inference and Proof in Participant Observation." *American Sociological Review* 23 (6): 652–60.

Berger, P. L., and T. Luckman. 1967. *The Social Construction of Reality.* New York: Doubleday.

Berkwits, M., and T. S. Inui. 1998. "Making Use of Qualitative Research Techniques." *Journal of General Internal Medicine* 13 (3): 195–99.

Britten, N. 1995. "Qualitative Interviews in Medical Research." *British Medical Journal* 311, no. 6999 (22 July): 251–53.

Britten, N., R. Jones, E. Murphy, and R. Stacy. 1995. "Qualitative Research Methods in General Practice and Primary Care." *Family Practice* 12 (1): 104–14.

Bryman, A. 1988. *Quantity and Quality in Social Research, Contemporary Social Research Series, vol. 18.* New York: Routledge.

Bryman, A., and R. G. Burgess, R.G., eds. 1994. *Analyzing Qualitative Data.* New York: Routledge.

Caudle, S. L. "Using Qualitative Approaches." In *The Handbook of Practical Program Evaluation,* edited by J. S. Wholey, H. P. Hatry, and K. E. Newcomer, pp. 69–95. San Francisco: Jossey-Bass.

Cicourel, A. V. 1964. *Method and Measurement in Sociology.* New York: Free Press of Glencoe.

Clifford, J., and Marcus, G. E., eds. 1986. *Writing Culture: The Poetics and Politics of Ethnography.* Berkeley: University of California Press.

Conrad, P. 1990. "Qualitative Research on Chronic Illness: A Commentary on Method and Conceptual Development." *Social Science and Medicine* 30 (11): 1257–63.

Corbin, J., and A. Strauss. 1990. "Grounded Theory Research: Procedures, Canons, and Evaluation Criteria," *Qualitative Sociology* 13 (1): 3–21.

Crabtree, B. F., and W. L. Miller. forthcoming. *Doing Qualitative Research, 2d ed.* Thousand Oaks, CA: Sage.

Creswell, J. W. 1998. *Qualitative Inquiry and Research Design: Choosing Among Five Traditions.* Thousand Oaks, CA: Sage.

Daly, J., and I. McDonald. 1992. "Covering Your Back: Strategies for Qualitative Research in Clinical Settings." *Qualitative Health Research* 2 (4): 416–38.

Denzin, N. K., and Y. S. Lincoln. 1994. *The Handbook of Qualitative Research.* Thousand Oaks, CA: Sage.

Dingwall, R., E. Murphy, P. Watson, D. Greatbatch, and S. Parker. 1998. "Catching Goldfish: Quality in Qualitative Research." *Journal of Health Services Research and Policy* 3 (3): 167–72.

Dohan, D., and M. Sanchez-Jankowski. 1998. "Using Computers to Analyze Ethnographic Field Data: Theoretical and Practical Considerations," *Annual Review of Sociology* 24: 477–98.

Dreher, M. 1994. "Qualitative Research Methods from the Reviewer's Perspective." In *Critical Issues in Qualitative Methods,* edited by J. M. Morse. London: Sage.

Elder, N. C., and W. L. Miller. 1995. "Reading and Evaluating Qualitative Research Studies." *The Journal of Family Practice* 41 (3): 279–85.

Fitzpatrick, R., and M. Boulton. 1996. "Qualitative Research in Health Care: I. The Scope and Validity of Methods." *Journal of Evaluation and Clinical Practice* 2 (2): 123–30.

Frankel, R. M. forthcoming. "Standards of Qualitative Research." In *Doing Qualitative Research,* edited by B. F. Crabtree and W. L. Miller. Thousand Oaks, CA: Sage.

Geertz, C. 1973. *The Interpretation of Cultures: Selected Essays.* New York: Basic Books.

Ginzberg, E. 1991. "Health Services Research and Health Policy." In *Health Services Research: Key to Health Policy,* edited by E. Ginzberg. Cambridge, MA: Harvard University Press.

Glaser, B. 1965. *Awareness of Dying.* Chicago: Aldine.

Glaser, B., and A. Strauss. 1967. *The Discovery of Grounded Theory.* Chicago: Aldine.

Goetz, J., and M. LeCompte. 1984. *Ethnography and Qualitative Design in Educational Research.* New York: Academic Press.

Green, J., and N. Britten. 1998. "Qualitative Research and Evidence Based Medicine." *British Medical Journal* 316, no. 7139 (18 April): 1230–32.

Guba, E. G. 1981. "Criteria for Assessing the Trustworthiness of Naturalistic Inquiry." *Educational Communication and Technology–A Journal of Theory* 29 (2): 75–91.

Guba, E. G., and Y. S. Lincoln. 1994. "Competing Paradigms in Qualitative Research." In *The Handbook of Qualitative Research,* edited by N. K. Denzin and Y. S. Lincoln. Thousand Oaks, CA: Sage.

———. 1989. *Fourth Generation Evaluation.* Newbury Park, CA: Sage.

Gubrium, J. F. 1992. "Qualitative Research Comes of Age in Gerontology." *The Gerontologist* 32 (5): 581–82.

Hammersley, M. 1998. *Reading Ethnographic Research: A Critical Guide, 2d ed.* (Longman Social Research Series). New York: Addison Wesley Longman.

———. 1992. *What's Wrong with Ethnography? Methodological Explorations.* London: Routledge.

Howe, K., and M. Eisenhardt. 1990. "Standards for Qualitative (and Quantitative) Research: A Prolegomenon." *Educational Researcher* 19 (4): 2–9.

Ianni, F. A. J., and M. T. Orr. 1978. "Toward Rapprochement of Quantitative and Qualitative Methodologies." In *Qualitative and Quantitative Methods in Evaluation Research,* edited by T. D. Cook and C. S. Reichardt, pp. 87–97. Thousand Oaks, CA: Sage.

Inhorn, M. 1995. "Medical Anthropology and Epidemiology: Divergences or Convergences?" *Social Science and Medicine* 40 (3): 285–90.

Inui, T. S. 1996. "The Virtue of Qualitative and Quantitative Research." *Annals of Internal Medicine* 125 (9): 770–71.

Inui, T. S., and R. M. Frankel. 1991. "Evaluating the Quality of Qualitative Research: A Proposal Pro-Tem." *Journal of General Internal Medicine* 6 (5): 485–86.

Jones, J., and D. Hunter. 1995. "Consensus Methods for Medical and Health Services Research." *British Medical Journal* 311, no. 7001 (5 August): 376–80.

Jones, R. 1995. "Why Do Qualitative Research? It Should Begin to Close the Gap Between the Sciences of Discovery and Implementation" (editorial). *British Medical Journal* 311 (6996): 2.

Kahn, D. L. 1993. "Ways of Discussing Validity in Qualitative Nursing Research." *Western Journal of Nursing Research* 15 (1): 122–26.

Keen, J., and T. Packwood. 1995. "Case Study Evaluation." *British Medical Journal* 311, no. 7002 (12 August): 444–46.

Kirk, J., and M. L. Miller. 1986. *Reliability and Validity in Qualitative Research.* Beverly Hills, CA: Sage.

Kitzinger, J. 1995. "Introducing Focus Groups." *British Medical Journal* 311, no. 7000 (29 July): 299–302.

Kuhn, T. 1970. *The Structure of Scientific Revolutions.* Chicago: University of Chicago Press.

Kuzel, A. J. forthcoming, "Sampling in Qualitative Inquiry." In *Doing Qualitative Research,* edited by B. F. Crabtree and W. L. Miller. Thousand Oaks, CA: Sage.

———. 1999. Personal communication, 30 May.

———. 1998. "Naturalistic Inquiry: An Appropriate Model for Family Medicine." *Family Medicine* 18 (6): 369–74.

———. 1992. "Sampling in Qualitative Inquiry." In *Doing Qualitative Research: Research Methods for Primary Care, 1st ed.,* edited by B. F. Crabtree and W. L. Miller, pp. 31–44. Thousand Oaks, CA: Sage.

Kuzel, A. J., J. D. Engel, R. B. Addison, and S. P. Bogdewic. 1994. "Desirable Features of Qualitative Research." *Family Practice Research Journal* 14 (4): 369–78.

Kuzel, A. J., and R. Like. 1991. "Standards of Trustworthiness for Qualitative Studies." In *Primary Care Research: Traditional and Innovative Approaches,* edited by P. G. Norton et al. (Research Methods for Primary Care, vol. 1). Thousand Oaks, CA: Sage.

LeCompte, N., and J. Goetz. 1982. "Problems of Reliability and Validity in Ethnographic Research." *Review of Educational Research* 52 (1): 31–60.

Lincoln, Y. S. 1995. "Emerging Criteria for Quality in Qualitative and Interpretive Research." *Qualitative Inquiry* 1 (3): 1, 275–89.

Lincoln, Y. S., and E. G. Guba. 1989. "Ethics: The Failure of Positivist Science." *Review of Higher Education* 12, no. 3 (spring): 221–40.

———. 1985. *Naturalistic Inquiry.* Beverly Hills, CA: Sage.

Luft, H. S. 1986. "Health Services Research as a Scientific Process: The Metamorphosis of an Empirical Research Project from Grant Proposal to Final Report." *Health Services Research* 21 (4): 563–83.

Mays, N., and C. Pope. 1995a. "Rigour and Qualitative Research." *British Medical Journal* 311, no. 6997 (8 July): 109–12.

———. 1995b. "Qualitative Research: Observational Methods in Health Care Settings." *British Medical Journal* 311, no. 6998 (15 July): 182–84.

Mechanic, D. 1989. "Medical Sociology: Some Tensions Among Theory, Method, and Substance." *Journal of Health and Social Behavior* 30 (June): 147–60.

Miles, M. B., and A. M. Huberman. 1994. *Qualitative Data Analysis: An Expanded Sourcebook, 2d ed.* Newbury Park, CA: Sage.

Miller, W. L., and B. J. Crabtree. 1994. "Qualitative Analysis: How to Begin Making Sense." *Family Practice Research Journal* 14 (4): 289–97.

Mishler, E. G. 1986. *Research Interviewing: Context and Narrative.* Cambridge, MA: Harvard University Press.

Morgan, D. L. 1998. "Practical Strategies for Combining Qualitative and Quantitative Methods: Applications to Health Research." *Qualitative Health Research* 8 (3): 362–76.

Morse, J. M. 1997. "Considering Theory Derived from Qualitative Research." In *Completing a Qualitative Project: Details and Dialogue,* edited by J. M. Morse. Thousand Oaks, CA: Sage.

———. 1994. "Designing a Fundable Qualitative Research Proposal." In *The Handbook of Qualitative Research,* edited by N. K. Denzin and Y. S. Lincoln. Thousand Oaks, CA: Sage.

Patton, M. Q. 1997. *Utilization-Focused Evaluation: The New Century Text, 3d ed.* Thousand Oaks, CA: Sage Publications.

———. 1990. *Qualitative Methods in Research and Evaluation.* Newbury Park, CA: Sage.

Pequegnat, W., B. Page, A. Strauss, et al. 1995. "Qualitative Inquiry: An Underutilized Strategy in AIDS Research." In *How to Write a Successful Research Grant Application: A Guide for Social and Behavioral Scientists,* edited by W. Pequegnat and E. Stover, pp. 97–111. New York: Plenum Press.

Popay, J., A. Rogers, and G. Williams. 1998. "Rationale and Standards for the Systematic Review of Qualitative Literature in Health Services Research." *Qualitative Health Research* 8 (3): 341–51.

Pope, C., and Mays, N. 1995. "Qualitative Research: Researching the Parts Other Methods Cannot Reach: An Introduction to Qualitative Methods in Health Services Research." *British Medical Journal* 311 (6996): 42–46.

Poses, R. M., and A. M. Isen. 1998. "Qualitative Research in Medicine and Health Care: Questions and Controversy." *Journal of General Internal Medicine* 13 (1): 32–38.

Ragin, C. C. 1994. *Constructing Social Research: The Unity and Diversity of Method.* Thousand Oaks, CA: Pine Forge Press.

Reason, P. 1994. "Three Approaches to Participative Inquiry." In *The Handbook of Qualitative Research,* edited by N. K. Denzin and Y. S. Lincoln. Thousand Oaks, CA: Sage.

Reichardt, C. S., and T. D. Cook. 1978. "Beyond Qualitative Versus Quantitative Methods." In *Qualitative and Quantitative Methods in Evaluation Research,* edited by T. D. Cook and C. S. Reichardt, pp. 7–32. Thousand Oaks, CA: Sage.

Reichardt, C. S., and S. F. Rallis, eds. 1994. *The Qualitative-Quantitative Debate: New Perspectives* (New Directions in Program Evaluation, no. 61), San Francisco: Jossey-Bass.

Reid, A. J. 1996. "What we Want. Qualitative Research: Promising Frontier in Family Medicine." *Canadian Family Physician* 42 (March): 387–89, 397–400.

Richards, L. 1994. "Writing: A Method of Inquiry." In *The Handbook of Qualitative Research,* edited by N. K. Denzin and Y. S. Lincoln. Thousand Oaks, CA: Sage.

Richards, T. J., and L. Richards. 1994. "Using Computers in Qualitative Research." In *The Handbook of Qualitative Research,* edited by N. K. Denzin and Y. S. Lincoln. Thousand Oaks, CA: Sage.

Robling, M. R., P. A. Owen, L. A. Allery, et. al. 1998. "In Defense of Qualitative Research: Responses to the Poses and Isen Perspective." *Journal of General Internal Medicine* 13 (1): 32–38.

Silverman, M., E. Ricci, and M. J. Gunter. 1990. "Strategies for Increasing the Rigor of Qualitative Methods in Evaluation of Health Care Programs." *Evaluation Review* 14 (1): 57–74.

Stange, K. C., W. L. Miller, B. F. Crabtree, P. J. O'Connor, and S. J. Zyanski. 1994. "Multimethod Research: Approaches for Integrating Qualitative and Quantitative Research." *Journal of General Internal Medicine* 9 (5): 278–82.

Strauss, A. 1987. *Qualitative Analysis for Social Scientists.* New York: Cambridge University Press.

Thesen, J., and A. Kuzel. forthcoming, "Participative Inquiry." In *Doing Qualitative Research, 2d ed.* Thousand Oaks, CA: Sage.

Thorne, S. 1997. "The Art (and Science) of Critiquing Qualitative Research." In *Completing a Qualitative Research Project,* edited by J. M. Morse. Thousand Oaks, CA: Sage.

Van Mannen, J. 1988. *Tales of the Field: On Writing Ethnography.* Chicago: University of Chicago Press.

Ventres, W. B., and R. M. Frankel. 1996. "Ethnography: A Stepwise Approach for Primary Care Researchers." *Family Medicine* 28 (January): 52–56.

Ward, M. M. 1993. "Study Design in Qualitative Research: A Guide to Assessing Quality." *Journal of General Internal Medicine* 8 (1): 107–109.

Willms, D. G., J. A. Best, D. W. Taylor, et al. 1990. "A Systematic Approach for Using Qualitative Methods in Primary Prevention Research." *Medical Anthropology Quarterly* 4, no. 4 (December): 391–409.

Yin, R. K. 1994. *Case Study Research, Design, and Methods, 2d ed.* Newbury Park, CA: Sage Publications.